

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

16  
REC'D - 8 JUN 2000

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PCT

|   |   |  |
|---|---|--|
| Applicant's or agent's file reference<br>TP 1281  | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |  |
| International application No.<br>PCT/SE99/00843   | International filing date (day/month/year)<br>18.05.1999  | Priority date (day/month/year)<br>22.05.1998 |
| International Patent Classification (IPC) or national classification and IPC <sub>7</sub><br>B 32 B 27/20, B 65 D 65/20 |   |  |
| Applicant<br>Tetra Laval Holdings & Finance SA et al  |   |  |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

|  |  |
|--|--|
| Date of submission of the demand<br><br>18.11.1999   | Date of completion of this report<br><br>22.05.2000                        |
| Name and mailing address of the IPEA/SE<br>Patent- och registreringsverket<br>Box 5055<br>S-102 42 STOCKHOLM<br>Facsimile No. 08-667 72 88 | Authorized officer<br><br>Hélène Erikson/Els<br>Telephone No. 08-782 25 00 |

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00843

## I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☐ the international application as originally filed.
- ☒ the description, pages 1-8, as originally filed,  
 pages \_\_\_\_\_, filed with the demand,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the claims, Nos. \_\_\_\_\_, as originally filed,  
 Nos. \_\_\_\_\_, as amended under Article 19,  
 Nos. \_\_\_\_\_, filed with the demand,  
 Nos. 1-8, filed with the letter of 11.05.2000,  
 Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the drawings, sheets/fig 1, as originally filed,  
 sheets/fig \_\_\_\_\_, filed with the demand  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00843

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

|                               |        |            |     |
|-------------------------------|--------|------------|-----|
| Novelty (N)                   | Claims | <u>1-8</u> | YES |
|                               | Claims |            | NO  |
| Inventive step (IS)           | Claims | <u>1-8</u> | YES |
|                               | Claims |            | NO  |
| Industrial applicability (IA) | Claims | <u>1-8</u> | YES |
|                               | Claims |            | NO  |

**2. Citations and explanations**

The claimed invention relates to a packaging material and a package, produced from the packaging material, for light-sensitive products. The packaging material includes at least one layer of plastic filled with 3-80 wt% mineral particles and 0,04-1 wt% carbon black. The plastic consists preferably of a high-density polyethylene or a copolymer of ethylene and propylene.

The most relevant documents cited in the search report are the following:

D1 JP 4 173 134 A

D2 EP 353 496 A1

D1 relates to a light-blocking bottle for milk. It comprises 100 wt parts polyester, 2,5-2,6 wt parts light-reflective pigment, e.g. TiO<sub>2</sub>, and 0,005-0,015 wt parts light-absorptive pigment, e.g. carbon black. The subject matter of claims 1-8 differs from the disclosure of D1 concerning the amount of mineral particles and carbon black. Also the type of plastic used differs. Regarding claims 1-8, D1 only discloses the general state of the art, which is not considered to be of particular relevance.

.../...

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00843

**Supplemental B x**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

D2 relates to a flexible material for the manufacture of liquid-tight packing containers. It comprises one or more layers of mineral filled thermoplastics laminated to one another. However, D2 mentions nothing about adding small amounts of carbon black to achieve a synergic light-barrier effect. In view of the above, D2 only discloses the general state of the art, which is not considered to be of particular relevance.

The claimed invention according to claims 1-8 is considered to be novel, have inventive step and industrial applicability.

## Replacement sheets

### Claims

5

1. A packaging material of single multi-layer type including at least one layer (11) of plastic which, for light barrier elevating purposes, includes particles (11c) of carbon black, **characterized in that** the layer (11) containing carbon black also includes mineral particles (11b) substantially uniformly distributed in the compound (11a) of the layer, ~~in~~ in a quantity between approx. 3 and 80% of the total weight of the layer. <sup>i</sup>

2. The packaging material as claimed in Claim 1, **characterized in that** the compound (11a) in the mineral-filled layer (11) containing carbon black consists of a plastic of polyolefin type.

3. The packaging material as claimed in any of the preceding Claims, **characterized in that** the compound (11a) in the mineral-filled layer (11) containing carbon black consists of a high density polyethylene or a copolymer of ethylene and propylene with a melt index between 0.5 and 5 according to ASTM (2.16 kg; 230°C).

4. The packaging material as claimed in Claim 3, **characterized in that** the quantity of carbon black in the mineral-filled layer (11) is between 0.04 and 1% of the total weight of the compound (11a).

5. The packaging material as claimed in any of the preceding Claims, **characterized in that** the mineral-filled layer (11) containing carbon black is surrounded by outer layers (12 and 13) of plastic on both sides of the layer (11), said outer layers (12 and 13) being permanently united to the layer (11) without interjacent binder or adhesive.

6. The packaging material as claimed in Claim 5, **characterized in that** the two outer layers (12 and 13) consist of the same plastic as the plastic in the interjacent layer (11).

11-05-2000

7. The packaging material as claimed in any of Claims 5-6, **characterized in that** of the two outer plastic layers (12 and 13) one includes a white pigment or other white colouring agent so as to conceal the interjacent layer (11) containing carbon black, at least from one direction.

5

8. A package, preferably a bottle, for light-sensitive products, **characterized in that** it is produced by a combined extrusion and blow moulding operation of a packaging material as claimed in any of Claims 1 to 7.

**AB Tetra Pak**

PATENT DEPARTMENT

Patent- och Registreringsverket  
Box 5055  
102 42 STOCKHOLM

Your reference  
PCT/SE99/00843

Our reference  
TP 1281-WO

Date  
10 May, 2000

**International Patent Application No. PCT/SE99/00843**

In response to the first written opinion in re of the above-identified International Application we submit herewith a new set of claims together with arguments and comments as follow.

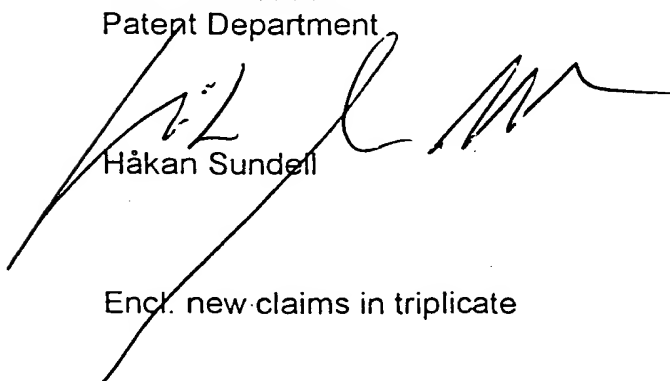
New claim 1 corresponds essentially to previous claims 1 and 2, and new claims 2-8 correspond to each one of previous claims 3-9.

The new claims have thus been drafted in conformity with said first written opinion and should therefore define the present invention in a patentable manner in view of the cited documents D1 and D2.

We look forward to receiving a positive preliminary examination report based upon the new claims as submitted herewith.

Yours sincerely

AB TETRA PAK  
Patent Department



Håkan Sundell

Encl. new claims in triplicate

**AB Tetra Pak**

Ruben Rausing's gata, S-221 86 Lund, Sweden  
Telephone +46 46 36 10 00. Telefax +46 46 13 79 23  
Reg. No.: 556050-0398

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ SE

# PCT

## CHAPTER II

### DEMAND

under Article 31 of the Patent Cooperation Treaty:  
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

|  |  |
|--|--|
| For International Preliminary Examining Authority use only   |  |
| Identification of IPEA   | Date of receipt of DEMAND                                |
| <b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>   |  |
| Applicant's or agent's file reference<br>TP 1281   |  |
| International application No.<br>PCT/SE99/00843  | International filing date (day/month/year)<br>18-05-1999 |
| (Earliest) Priority date (day/month/year)<br>22-05-1998  |  |
| Title of invention A packaging material and packages produced from the material for light-sensitive products   |  |
| <b>Box No. II APPLICANT(S)</b>   |  |
| Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)<br>TETRA LAVAL HOLDINGS & FINANCE SA<br>Av. Général-Guisan 70<br>CH-1009 PULLY<br>Switzerland |  |
| Telephone No.:<br>41 217 29 22 11  |  |
| Facsimile No.:<br>41 217 29 27 59  |  |
| Teleprinter No.:<br>041 21 45 58 11  |  |
| State (that is, country) of nationality:<br>CH   | State (that is, country) of residence:<br>Switzerland    |
| Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)<br>Bergholtz, Lars<br>Rapsvägen 38<br>S-263 54 HÖGANÄS<br>Sweden                              |  |
| State (that is, country) of nationality:<br>SE   | State (that is, country) of residence:<br>Sweden         |
| Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)<br>Klint, Lotta<br>38 Jamison Drive<br>York, Pa 17402<br>USA                                  |  |
| State (that is, country) of nationality:<br>SE   | State (that is, country) of residence:<br>USA            |
| <input type="checkbox"/> Further applicants are indicated on a continuation sheet.   |  |



**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**The following person is ☒ agent ☐ common representativeand ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination.☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*Sundell, Håkan  
AB TETRA PAK  
Ruben Rausings gata  
SE-221 86 Lund, Sweden

Telephone No.:

046-36 22 97

Facsimile No.:

046-13 79 23

Teleprinter No.:

32140 TPLUND

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:\***

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filedthe description ☐ as originally filed  
☐ as amended under Article 34the claims ☐ as originally filed  
☐ as amended under Article 19 (together with any accompanying statement)  
☐ as amended under Article 34the drawings ☐ as originally filed  
☐ as amended under Article 342. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English

☒ which is the language in which the international application was filed.☐ which is the language of a translation furnished for the purposes of international search.☐ which is the language of publication of the international application.☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.**Box No. V ELECTION OF STATES**The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)*

excluding the following States which the applicant wishes not to elect:

## Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- |  |   |        |
|--|---|--------|
| 1. translation of international application                              | : | sheets |
| 2. amendments under Article 34   | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. copy (or, where required, translation) of statement under Article 19  | : | sheets |
| 5. letter  | : | sheets |
| 6. other (specify)   | : | sheets |

For International Preliminary Examining Authority use only

received not received

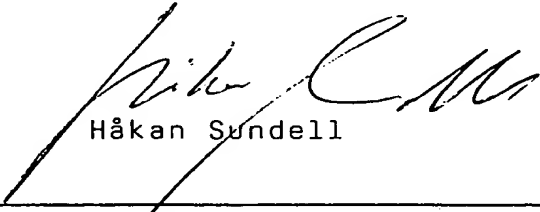
|                          |                          |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

The demand is also accompanied by the item(s) marked below:

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet                             | 4. <input type="checkbox"/> statement explaining lack of signature                                  |
| 2. <input type="checkbox"/> separate signed power of attorney                            | 5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form |
| 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 6. <input type="checkbox"/> other (specify):  |

## Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

  
Håkan Sundell

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

3. ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.

☐ The applicant has been informed accordingly.

4. ☐ The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.

5. ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.

For International Bureau use only

Demand received from IPEA on:

## PCT

## FEE CALCULATION SHEET

Annex to the Demand for international preliminary examination

|   |  |  |
|---|--|--|
| International application No. <b>PCT/SE99/00843</b>   | For International Preliminary Examining Authority use only |  |
| Applicant's or agent's file reference <b>TP 1281</b>  | Date stamp of the IPEA                                     |  |
| Applicant<br><div style="text-align: center; font-weight: bold;">TETRA LAVAL HOLDINGS &amp; FINANCE SA</div>  |  |  |
| <b>Calculation of prescribed fees</b>   |  |  |
| 1. Preliminary examination fee .....  | <b>4.200:--</b>  | <div style="border: 1px solid black; width: 20px; height: 20px; display: inline-block; line-height: 20px;">P</div> |
| 2. Handling fee <i>(Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee.)</i> .....                       | <b>1.250:--</b>  | <div style="border: 1px solid black; width: 20px; height: 20px; display: inline-block; line-height: 20px;">H</div> |
| 3. Total of prescribed fees<br>Add the amounts entered at P and H<br>and enter total in the TOTAL box .....   | <b>5.450:--</b>  |  |
| <div style="border: 1px solid black; width: 100px; margin: 0 auto; padding: 2px 5px;">TOTAL</div>   |  |  |
| <b>Mode of Payment</b>  |  |  |
| <input checked="" type="checkbox"/> authorization to charge deposit account with the IPEA (see below)   | <input type="checkbox"/> cash                              |  |
| <input type="checkbox"/> cheque   | <input type="checkbox"/> revenue stamps                    |  |
| <input type="checkbox"/> postal money order   | <input type="checkbox"/> coupons                           |  |
| <input type="checkbox"/> bank draft   | <input type="checkbox"/> other (specify):                  |  |
| <b>Deposit Account Authorization</b> <i>(this mode of payment may not be available at all IPEAs)</i>  |  |  |
| The IPEA/ <u>SE</u> <input checked="" type="checkbox"/> is hereby authorized to charge the total fees indicated above to my deposit account.  |  |  |
| <input type="checkbox"/> <i>(this check-box may be marked only if the conditions for deposit accounts of the IPEA so permit)</i> is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account. |  |  |
| <u>164020</u><br>Deposit Account Number   | <u>17 November, 1999</u><br>Date (day/month/year)          | <br>Signature <b>Håkan Sundell</b>   |

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Sundell, Håkan  
AB TETRA PAK  
Ruben Rausings gata  
SE-221 86 Lund, Sweden

# PCT

## WRITTEN OPINION

(PCT Rule 66)

|  |   |
|--|---|
| Date of mailing<br>(day/month/year) <span style="float: right; font-weight: bold;">04-05-2000</span>             |   |
| Applicant's or agent's file reference<br>TP 1281   | <b>REPLY DUE</b> within 45 days<br>from the above date of mailing |
| International application No.<br>PCT/SE99/00843  | International filing date (day/month/year)<br>18.05.1999          |
| Priority date (day/month/year)<br>22.05.1998   |   |
| International Patent Classification (IPC) or both national classification and IPC7<br>B 32 B 27/20, B 65 D 65/20 |   |
| Applicant<br>Tetra Laval Holdings & Finance SA et al   |   |

|   |  |
|---|--|
| 1. This written opinion is the <u>first</u> (first, etc.) drawn by this International Preliminary Examining Authority.  |  |
| 2. This opinion contains indications relating to the following items:   |  |
| I   | <input checked="" type="checkbox"/> Basis of the report  |
| II  | <input type="checkbox"/> Priority  |
| III   | <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| IV  | <input type="checkbox"/> Lack of unity of invention  |
| V   | <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| VI  | <input type="checkbox"/> Certain documents cited   |
| VII   | <input type="checkbox"/> Certain defects in the international application  |
| VIII  | <input type="checkbox"/> Certain observations on the international application   |
| 3. The applicant is hereby <b>invited to reply</b> to this opinion.   |  |
| <b>When?</b> See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).   |  |
| <b>How?</b> By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.   |  |
| <b>Also</b> For an additional opportunity to submit amendments, see Rule 66.4.<br>For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.<br>For an informal communication with the examiner, see Rule 66.6. |  |
| <b>If no reply is filed</b> , the international preliminary examination report will be established on the basis of this opinion.  |  |
| 4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: <u>22.09.2000</u>  |  |

|  |  |
|--|--|
| Name and mailing address of the IPEA/SE<br>Patent- och registreringsverket<br>Box 5055<br>S-102 42 STOCKHOLM<br>Facsimile No. 08-667 72 88 | Authorized officer<br><br>Hélène Erikson/Els<br>Telephone No. 08-782 25 00 |
|--|--|

WRITTEN OPINION

International application No.

PCT/SE99/00843

I. Basis of the report

1. This opinion has been drawn on the basis of (*Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".*):

- ☒ the international application as originally filed.
- ☐ the description, pages \_\_\_\_\_, as originally filed,  
pages \_\_\_\_\_, filed with the demand,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☐ the claims, Nos. \_\_\_\_\_, as originally filed,  
Nos. \_\_\_\_\_, as amended under Article 19,  
Nos. \_\_\_\_\_, filed with the demand,  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☐ the drawings, sheets/fig \_\_\_\_\_, as originally filed,  
sheets/fig \_\_\_\_\_, filed with the demand  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

3. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

WRITTEN OPINION

International application No.

PCT/SE99/00843

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

|                               |        |            |     |
|-------------------------------|--------|------------|-----|
| Novelty (N)                   | Claims | <u>2-9</u> | YES |
|                               | Claims | <u>1</u>   | NO  |
| Inventive step (IS)           | Claims | <u>1-9</u> | YES |
|                               | Claims |            | NO  |
| Industrial applicability (IA) | Claims | <u>1-9</u> | YES |
|                               | Claims |            | NO  |

2. Citations and explanations

The claimed invention relates to a packaging material and a package, produced from the packaging material, for light-sensitive products. The packaging material includes at least one layer of plastic filled with 3-80 wt% mineral particles and 0,04-1 wt% carbon black. The plastic consists preferably of a high-density polyethylene or a copolymer of ethylene and propylene.

The most relevant documents cited in the search report are the following:

D1 JP 4 173 134 A  
D2 EP 353 496 A1

D1 relates to a light-blocking bottle for milk. It comprises 100 wt parts polyester, 2,5-2,6 wt parts light-reflective pigment, e.g. TiO<sub>2</sub>, and 0,005-0,015 wt parts light-absorptive pigment, e.g. carbon black. The subject matter of claim 1 does not differ from what is disclosed in D1. Therefore, this claim is considered to lack novelty.

The subject matter of claims 2-9 differs from the disclosure of D1 concerning the amount of mineral particles and carbon black. Also the type of plastic used differs.

Regarding claims 2-9, D1 only discloses the general state of the art, which is not considered to be of particular relevance. The claimed invention according to claims 2-9 is considered to be novel, have inventive step and industrial applicability.

.../...

WRITTEN OPINION

International application No.

PCT/SE99/00843

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

D2 relates to a flexible material for the manufacture of liquid-tight packing containers. It comprises one or more layers of mineral filled thermoplastics laminated to one another. However, D2 mentions nothing about adding small amounts of carbon black to achieve a synergic light-barrier effect. In view of the above, D2 only discloses the general state of the art, which is not considered to be of particular relevance.

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau



RECEIVED  
MAR 29 2001  
172

TC 1700

(43) International Publication Date  
2 December 1999 (02.12.1999)

PCT

(10) International Publication Number  
WO 99/61245 A1

(51) International Patent Classification<sup>6</sup>: B32B 27/20, B65D 65/20

(21) International Application Number: PCT/SE99/00843

(22) International Filing Date: 18 May 1999 (18.05.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
9801809-6 22 May 1998 (22.05.1998) SE

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: A PACKAGING MATERIAL AND PACKAGES PRODUCED FROM THE MATERIAL FOR LIGHT-SENSITIVE PRODUCTS

(57) Abstract: The disclosure relates to a packaging material and packages, for example bottles, produced from the packaging material, for light-sensitive products. The packaging material (10) includes at least one layer (11) of mineral-filled plastic which, for light barrier elevating purposes, also includes particles (11c) of carbon black. The material (10) which is preferably of triple-layer type, has the mineral-filled layer (11) containing carbon black disposed between outer, surrounding layers (12 and 13) of plastic which is preferably the same plastic as the plastic in the interjacent layer (11). In order to conceal the interjacent layer (11) containing carbon black, at least one, but preferably both, of the outer plastic layers may incorporate white pigment or other white colouring agent, preferably titanium dioxide (TiO<sub>2</sub>). Bottles are produced from the packaging material (10) by a combined extrusion and blow moulding operation in a per se known manner using conventional process equipment.

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## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|   |   |  |
|---|---|--|
| Applicant's or agent's file reference<br><b>TP 1281</b>         | <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"><b>FOR FURTHER ACTION</b></div> <div style="font-size: small;">see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</div> </div> |  |
| International application No.<br><b>PCT/SE 99/00843</b>         | International filing date ( <i>day/month/year</i> )<br><b>18 May 1999</b>   | (Earliest) Priority Date ( <i>day/month/year</i> )<br><b>22 May 1998</b> |
| Applicant<br><b>Tetra Laval Holdings &amp; Finance SA et al</b> |   |  |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of   3   sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).
  
2. ☐ Unity of invention is lacking (See Box II).
  
3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing
 

☐ filed with the international application.  
☐ furnished by the applicant separately from the international application,  

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ transcribed by this Authority.
  
4. With regard to the title, ☒ the text is approved as submitted by the applicant.  
☐ the text has been established by this Authority to read as follows:
  
5. With regard to the abstract,
 

☒ the text is approved as submitted by the applicant.  
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
  
6. The figure of the drawings to be published with the abstract is:
 

Figure No.   1

☐ as suggested by the applicant. ☐ None of the figures.  
☒ because the applicant failed to suggest a figure.  
☐ because this figure better characterizes the invention.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 99/00843

## A. CLASSIFICATION OF SUBJECT MATTER

IPC6: B32B 27/20, B65D 65/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: B32B, B65D, C08K, C08L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| X         | JP 4173134 A (DAINIPPON PRINTING CO LTD)<br>1992-06-19 (abstract) World Patents Index<br>(online). U.K.: Derwent Publications, Ltd.<br>(retrieved on 1999-08-27). Retrieved from:<br>EPO WPI database. DW9231, Accession no.<br>92-255458 | 1                     |
| Y         | --  | 2-11                  |
| Y         | EP 0353496 A1 (TETRA PAK FINANCE & TRADING S.A.),<br>7 February 1990 (07.02.90), abstract   | 2-11                  |
|           | --  |                       |

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

27 August 1999

Date of mailing of the international search report

01-09-1999

Name and mailing address of the ISA/

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 99/00843

| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |  |                       |
|---|--|-----------------------|
| Category*   | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
| A   | <p>File WPI, Derwent accession no. 94-196825,<br/>Dainippon Printing Co Ltd: "Container for<br/>liq.foods - includes paper layer, polyolefin-<br/>based resin layer on outside of paper layer,<br/>barrier layer of inorganic oxide thin film<br/>on inside, inner sealing layer and a light-<br/>shading;" &amp; JP,A,6135439, 940517</p> <p>--<br/>-----</p> | 1-11                  |
|   |  |                       |

## INTERNATIONAL SEARCH REPORT

Information on patent family members

02/08/99

International application No.

PCT/SE 99/00843

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
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